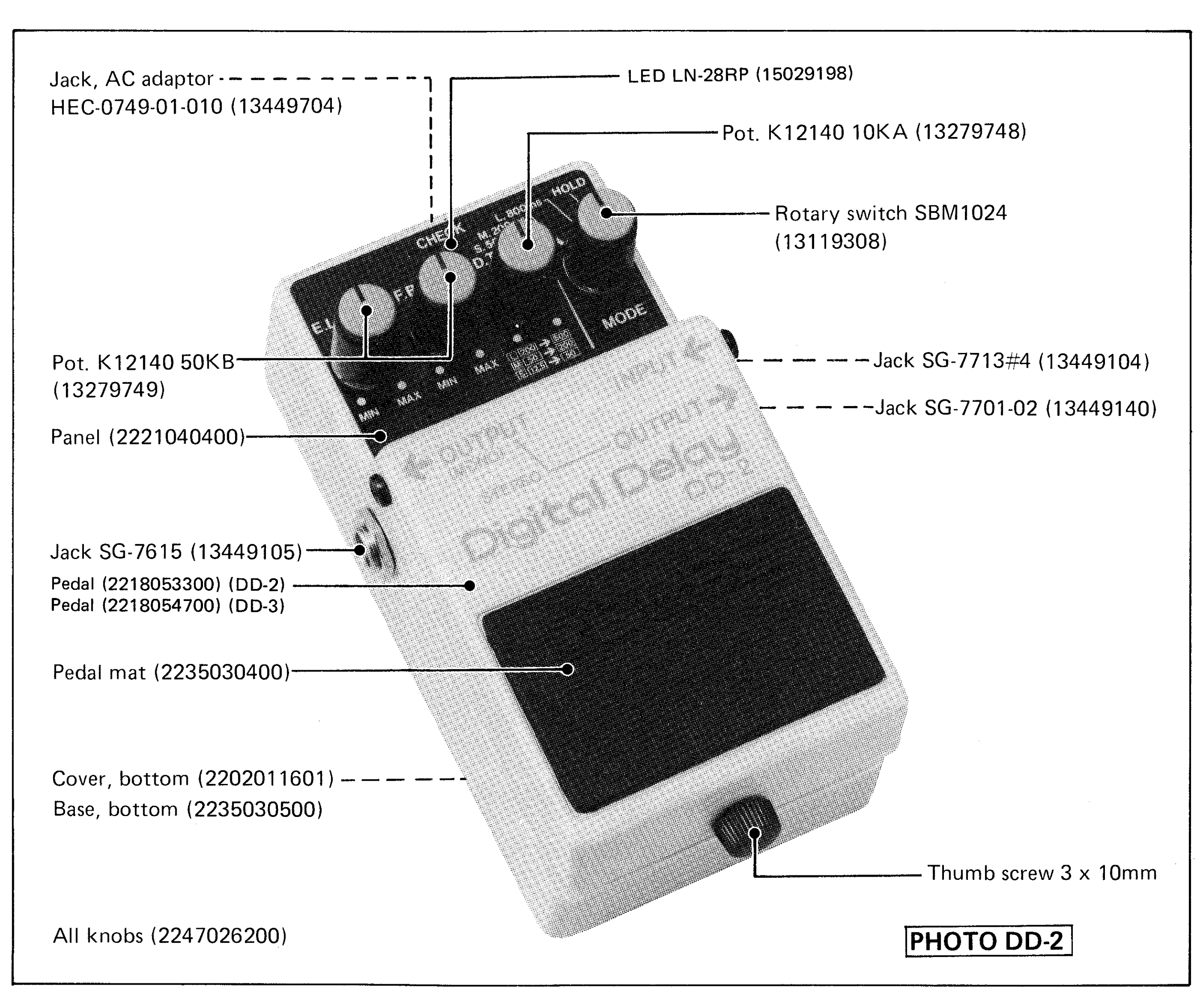
BOSS DD-2/3 SERVICE NOTES

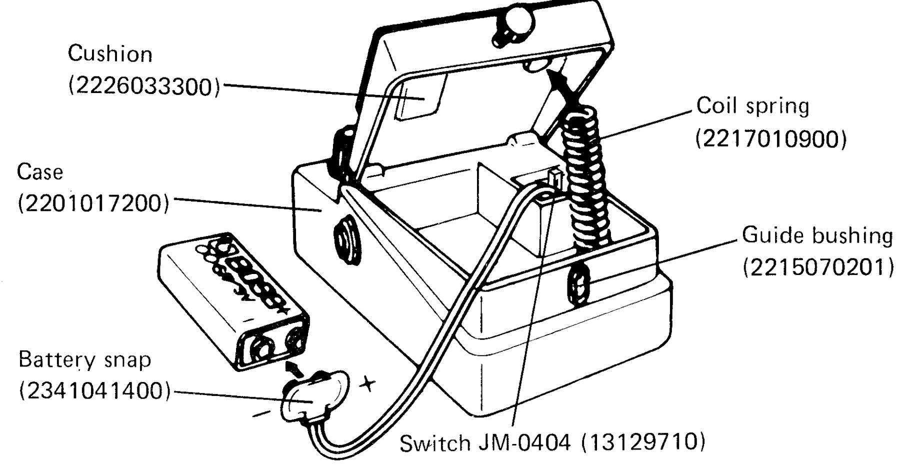
First Edition

＊This notes includes the contents of the DD-2 First Edition and makes it obsolete.
＊DD-2のサービスノート第一版は廃版とし本サービスノートに併合します。

SPECIFICATIONS

Power	: 9VDC (battery or AC adaptor)
Current draw	: 45–65mA @9V, D.TIME center
Delay time	: 12.5ms(min)–800ms(max)
	12.5–50ms – MODE at S.50ms
	50–200ms – MODE at M.200ms
	200–800ms – MODE at L.800ms
Hold time	: 200–800ms – MODE at HOLD
Frequency response, +1dB, –3dB	: Delay sound 40Hz–7kHz
	Direct sound 10Hz–60kHz
Residual noise	: –95dBm (IHF-A)
Input impedance	: 1MΩ
Output load impedance	: 10KΩ or more
Dimensions	: 70(W) x 55(H) x 125(D)mm
	2-3/4(W) x 2-3/16(H) x 5(D)in
Weight	: 450 g / 1 lb.





PARTS LIST

＊The difference between DD-2 and DD-3 is nothing but the pedal.
＊DD-2とDD-3の違いはペダルだけで、他は全く同じです。

CASE

2201017200	Case		
2221040400	Panel		
2202011601	Cover		bottom
2235030500	Base		bottom
2218054700	Pedal	(DD-3)	
2218053300	Pedal	(DD-2)	
2235030400	Pedal mat		
2247026200	Knob		blue

IC

15229811	RDD63H101	Main Controller
15179314	HM4864P-3 64K D-RAM	
	or 15179315 M5K4164NP-20	
	or MSM3764-20RS (When replacing, use HM4864P-3	
	or M5K4164ND-20, lower current type.)	
15219108	NE570	Compander NR
15169515	TC74HC00P	Quad 2-input NAND gate
15159115H0	HD14066BP	Analog switch
15189136	M5218L	OP amp
15189152	NJM5534D	OP amp
15189167	μPC271C	Comparator
	or 15189111J1 NJM-311D	
15229809	BA634	Flip-Flop
15199109F0	μA78L05	3-terminal voltage regulator
	or 15199144 μPC78L05J	

TRANSISTOR

15129104	2SC732TM-GR (or 15129144 2SC2458L-GR)
15129135	2SC2603F
15119124	2SA1115F

FET

15139101	2SK30A-Y (or 151391160Y 2SK118-Y)
15139102	2SK30A-0 (or 15139116 2SK118-0)

DIODE

15019125	1SS133	
15019633	RD11FB-3	zener
15019523	RD5.1EB-3	zener
15029117	SLP-135B	LED
	or 15029198 LN-28RP	

JACK

13449704	HEC-0749-01-010	AC adaptor
13449105	SG-7615	OUTPUT (MONO)
13449140	SG-7701-02	OUTPUT
13449104	SG-7713 #4	INPUT

SWITCH

13129710	JM-0404	push
13119308	SBM1024	rotary

POTENTIOMETER

13279748	K12140	10KA	
13279749	K12140	50KB	
13299311	EVN-31CA00B14	10KB	trimmer
13299151	H0651A009-2.2KB		trimmer



PCB

75224510	Effect board	(pcb 2291088702)
75224520	Volume board	(pcb 2291088702)
75224530	Switch board	(pcb 2291088702)
75228550	DC Supply board	(pcb 2291097800)
....	LED board	(pcb 2291049600)

RESISTOR

13919134	RKM14L492-103F R-2R ladder network		
13809173T0	100	1/6W	5%
13809581T0	220	1/6W	5%
13809197T0	1K	1/6W	5%
13809601T0	1.5K	1/6W	5%
13809207T0	2.7K	1/6W	5%
13809209T0	3.3K	1/6W	5%
13809213T0	4.7K	1/6W	5%
13809217T0	6.8K	1/6W	5%
13809221T0	10K	1/6W	5%
13809229T0	22K	1/6W	5%
13809233T0	33K	1/6W	5%
13809237T0	47K	1/6W	5%
13809245T0	100K	1/6W	5%
13809257T0	330K	1/6W	5%
13809261T0	470K	1/6W	5%
13809269T0	1M	1/6W	5%
13809243T0	82K	1/6W	5%

ELECTROLYTIC CAPACITOR (miniature)

13629402	SRE50VB1	1μF/50V
13629345	SRE16VB4R7	4.7μF/16V
13629346	SRE16VB10	10μF/16V
13629309	SRE6.3VB47B3	47μF/6.3V
13629150J0	SRA16V100MF	100μF/16V

FLAT CABLE

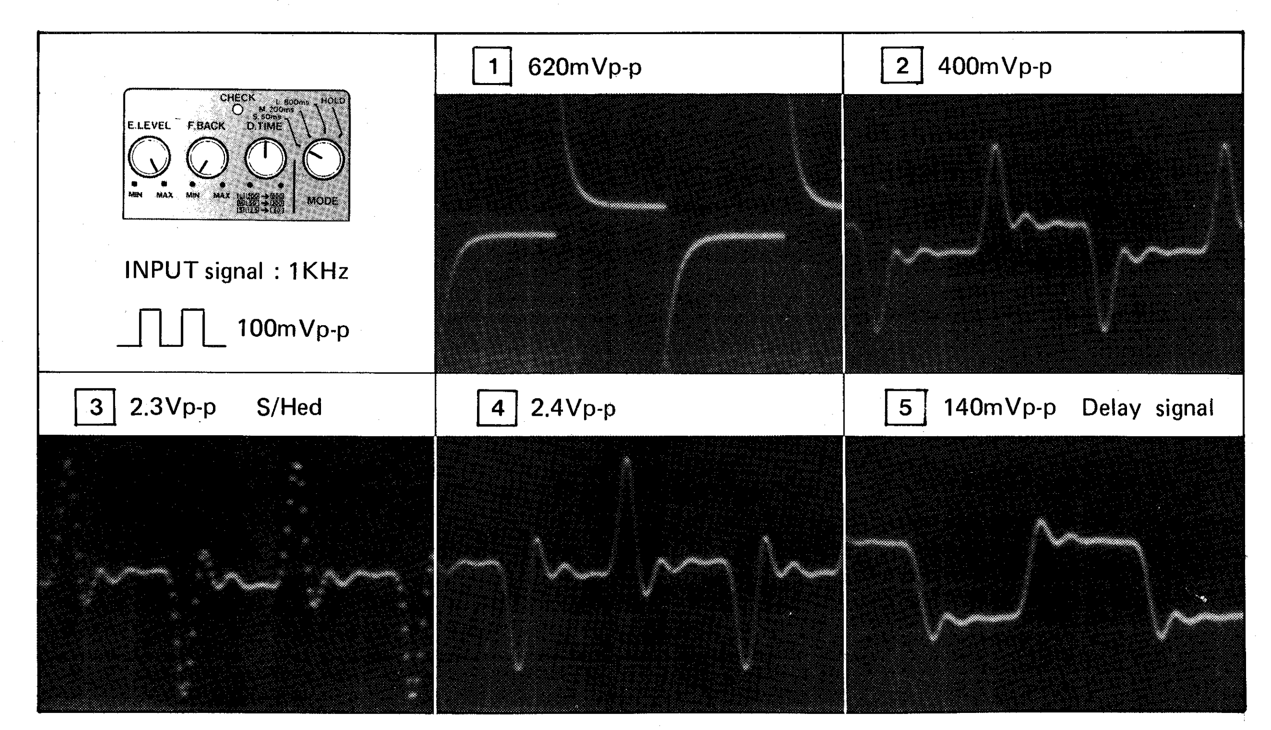
2347014800	5P	180L
2347014900	4P	150L
2347015000	3P	180L

OTHERS

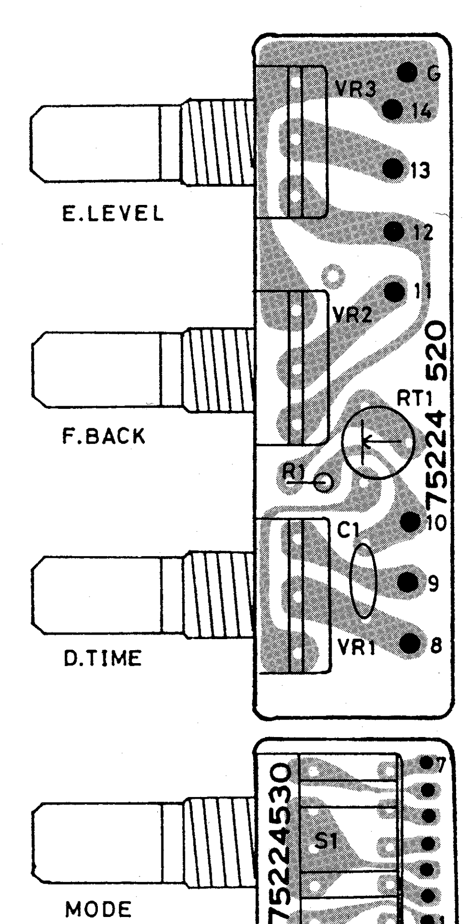
2215070201	Guide bushing
2226033300	Cushion
2217010900	Coil spring
2341041400	Battery snap
2225021801	Shield sheet
2216052900	Plastic sheet (clear)

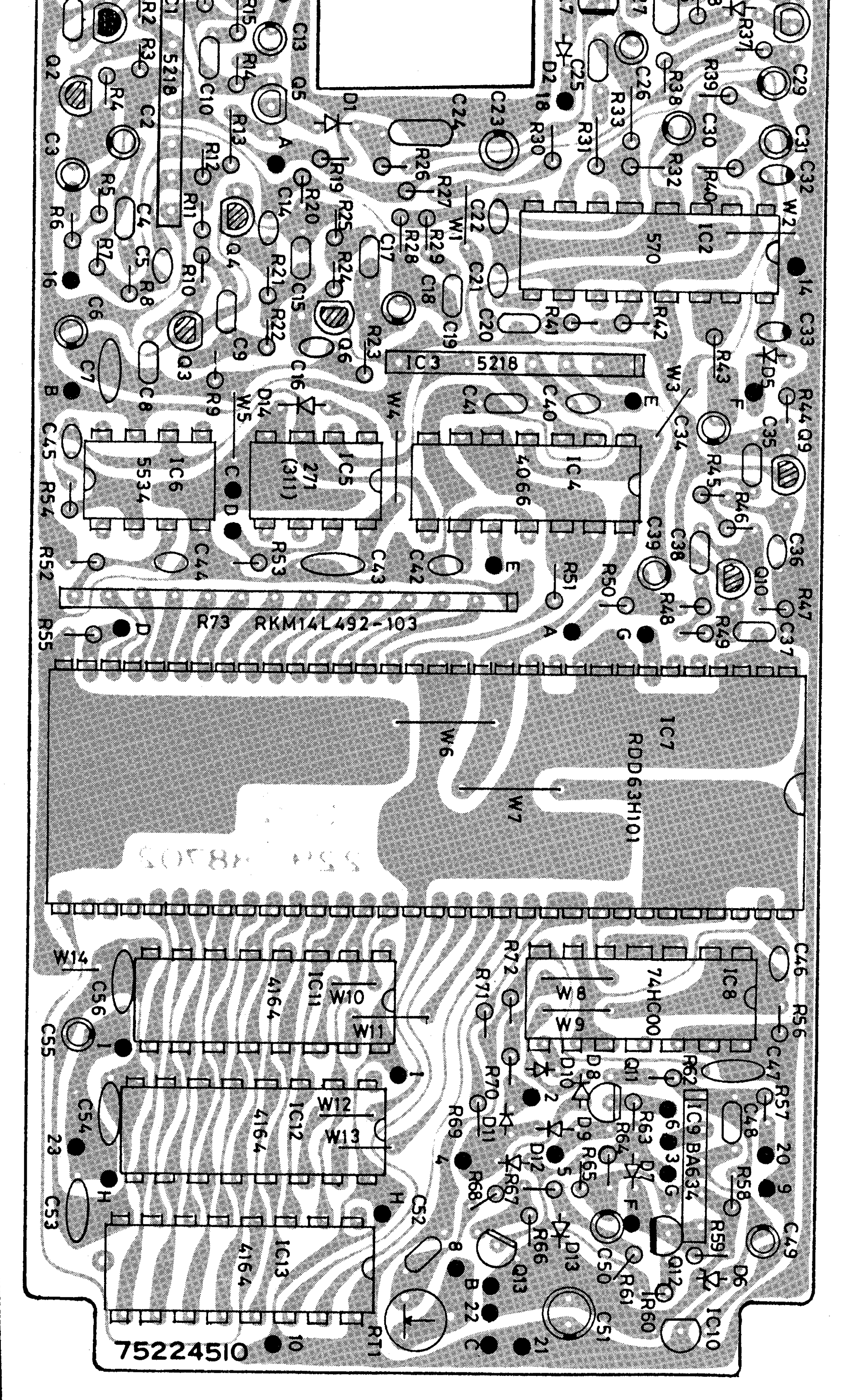
WAVEFORMS

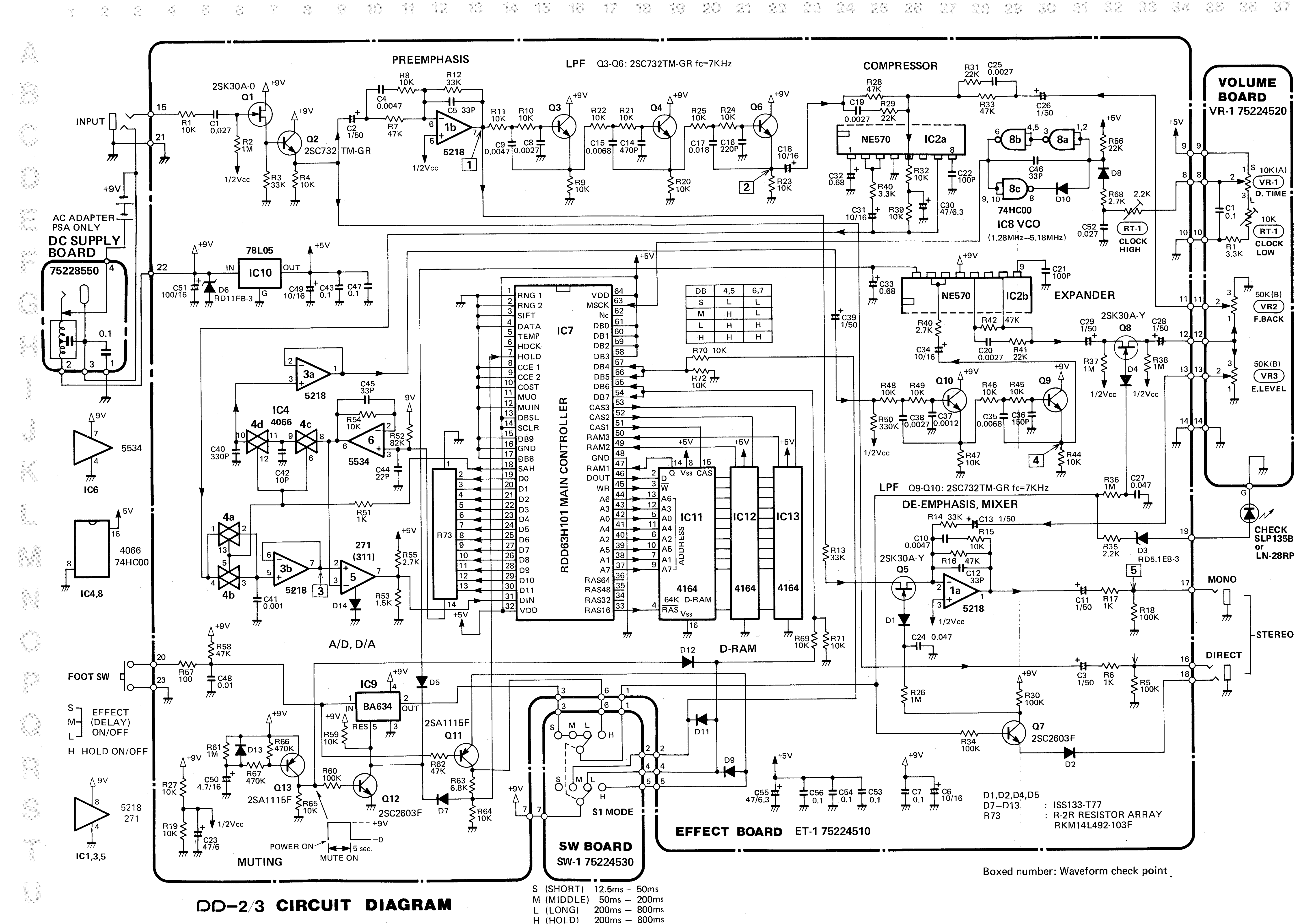
Boxed numbers are keyed to those (check point) on the schematic diagram.



- RESISTOR 1/6
- 1SS133
- RD11FB3
- ELECTROLYTIC CAP.
- MYLAR FILM CAP.
- TANTALUM CAP.
- CERAMIC CAP.
- 2SK1118–0 (2SK30A–0)
- 2SK1118–Y (2SK30A–Y)
- 2SA1115F
- ~~2SC2458LGR~~ 2SC732TMGR
- 2SC2603F
- 78L05
- RD5.1EB3







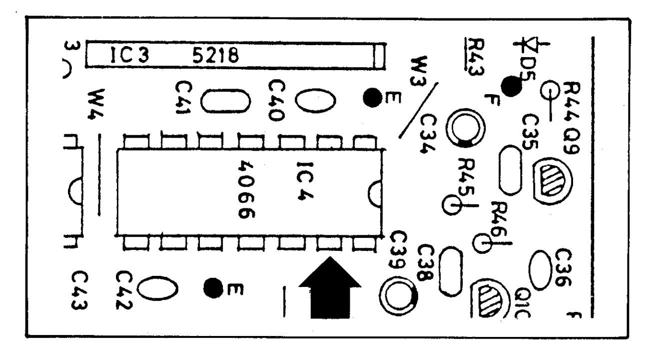
DB	4,5	6,7
S	L	L
M	H	L
L	H	H
H	H	H

DD–2/3 CIRCUIT DIAGRAM

ADJUSTMENT

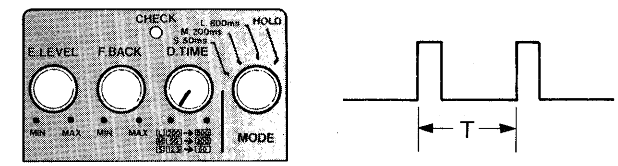
CLOCK FREQUENCY

This adjustment is to set the range of Master Clock (MSCK) frequency at IC8 VCO.



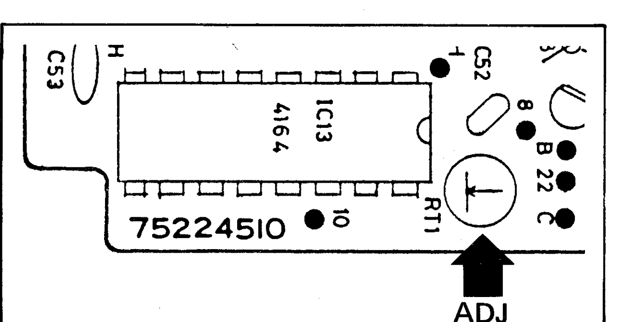
Connect the scope to pin 13 of IC4 (or IC7 pin 18 SAH).

1. High End

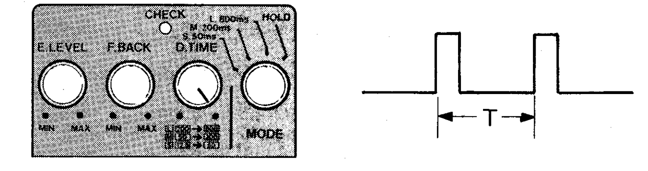


Adjust RT-1 on Effect Board for T=12.12μs (82.5K ± 0.4kHz).

The MSCK should be 5.18M ± 25.6kHz.

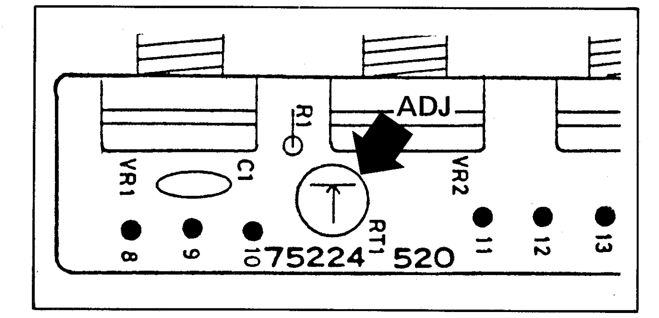


2. Low End



Adjust RT-1 on Volume Board for T=50μs (20K ± 0.1kHz).

The MSCK should be 1.28M ± 6.4kHz.



DD-2 is provided with MONO and DIRECT jacks for use in STEREO mode. Presented on MONO jack is a DIRECT or DELAY, or a combination of the both, depending on ON or OFF of Q5 and Q8 as shown below.
To DIRECT jack, only direct signal is routed regardless of jack connections and switchings.

NOTE: FOOT CONTROL
In S, M or L mode, releasing Foot Switch does not change control signals to Q5 and Q8 because IC9 F.F. will not turn its output till the next press.

	MONO MODE (DIRECT jack-open)		STEREO MODE (DIRECT jack-plugged)	
Signal at MONO jack	Direct signal only	Direct, delay mixed signal	Direct signal only	Delay signal only
Foot switch (Q11 collector or IC9 out)	OFF (L)	ON (H)	OFF (L)	ON (H)
Q8	OFF	ON	OFF	ON
Q5	ON	ON	ON	OFF

IC DATA

